



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of:

Masumitsu INO et al.

Serial No.: 09/424,544

File: November 24, 1999

For: LIQUID CRYSTAL DISPLAY DEVICE

Examiner: J.Piziali

Art Unit: 2673

SUBMISSION OF TRANSLATED INTERNATIONAL SEARCH REPORT

Commissioner for Patents
Washington, D.C. 20231

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Technology Center 2600

Sir:

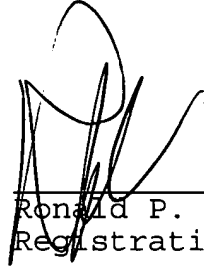
The applicant through its representatives and attorneys, hereby brings to the attention of the Examiner a translated copy of the International Search Report (ISR) of PCT/JP99/01441 mailed on August 28, 2000.

The documents cited within the enclosed International Search Report were previously listed on Form PTO-1449 filed in the Patent and Trademark Office on June 8, 2000. Consideration of the cited documents was noted within the Office Action of Paper No. 5, mailed on August 17, 2001.

Please take this translated copy of the International Search

Report into account in the examination of this application and
make its consideration of record.

Respectfully submitted,



Ronald P. Kananen
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DATE: September 16, 2002

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PATENT COOPERATION TREATY

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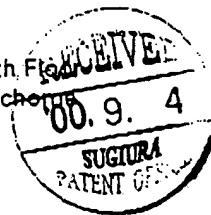
**NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

(PCT Rule 72.2)

From the INTERNATIONAL BUREAU

To:

SUGIURA, Masatomo
Ikebukuro Park Building 7th Floor
49-7, Minami Ikebukuro 2-chome
Toshima-ku
Tokyo 171-0022
JAPON



Date of mailing (day/month/year) 28 August 2000 (28.08.00)	
Applicant's or agent's file reference S99P0720WO00	IMPORTANT NOTIFICATION
International application No. PCT/JP99/01441	International filing date (day/month/year) 23 March 1999 (23.03.99)
Applicant SONY CORPORATION et al	

1. Transmittal of the translation to the applicant.

The International Bureau transmits herewith a copy of the English translation made by the International Bureau of the international preliminary examination report established by the International Preliminary Examining Authority.

2. Transmittal of the copy of the translation to the elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following elected Offices requiring such translation:

EP,US

The following elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

KR

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report.

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 740.14.35	Authorized officer Eliott Peretti Telephone No. (41-22) 338.83.38
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Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference S99P0720WO00	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP99/01441	International filing date (day/month/year) 23 March 1999 (23.03.99)	Priority date (day/month/year) 25 March 1998 (25.03.98)
International Patent Classification (IPC) or national classification and IPC G02F 1/133, 1/1345, G09G 3/36		
Applicant SONY CORPORATION		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet. <input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of <u>5</u> sheets.
3. This report contains indications relating to the following items: I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 25 October 1999 (25.10.99)	Date of completion of this report 30 March 2000 (30.03.2000)
Name and mailing address of the IPEA/IP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP99/01441

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
pages _____ 1-37 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the claims:
pages _____ 2-9,11-16,18-19 _____, as originally filed
pages _____ 1,17,20 _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____ 10,21 _____, filed with the letter of _____ 23 March 2000 (23.03.2000)
- ☒ the drawings:
pages _____ 1-36 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP99/01441

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-2,10-21	YES
	Claims	3-9	NO
Inventive step (IS)	Claims		YES
	Claims	1-21	NO
Industrial applicability (IA)	Claims	1-21	YES
	Claims		NO

2. Citations and explanations

Concerning claims 1, 2

Document 1 [JP, 4-12318, A (Sanyo Electric Co., Ltd.), 16 January, 1992 (16.01.92); page 2, upper right column, lines 2-3; Fig. 6] discloses the idea of setting the number of output terminals for one of the driver circuits that provide signals to a liquid crystal display device to be a fractional number. In document 1 there are specific disclosures only for the driver circuit side relative to the scanning electrode, but it is considered that it would be obvious to a person skilled in the art that the same kind of connections could also be set for the driver circuit side relative to the signal lines.

Concerning claims 3-9

Document 2 [JP, 7-78672, B2 (Matsushita Electric Industrial Co., Ltd.), 23 August, 1995 (23.08.95); page 2, left column, lines 32-37] contains disclosures equivalent to those of claims 3-9. It is thus considered that the subject matter of claims 3-9 is not novel.

Concerning claims 10-14, 18-20

Document 3 [JP, 4-52684, A (NEC Kansai, Ltd.), 20 February, 1992 (20.02.92); entire text] and document 4 [JP, 64-84297, A (Toshiba Corporation), 29 March, 1989 (29.03.89); entire text] contains disclosures concerning connections between driver circuits and signal lines similar to those disclosed in claims 10-14 and 17-20.

Since each of documents 2-4 concerns driving circuits for a liquid crystal display device, it is considered that applying the connections between driver circuits and signal lines disclosed in document 3 or 4 to the liquid crystal display device disclosed in document 2 would be obvious to a person skilled in the art.

In particular, the point whereby the driver outputs are provided to the signal lines according to time sharing within a single horizontal scanning period is disclosed in the explanation in the section of document 4 from page 4, upper left column, line 12 to lower left column, line 2.

Concerning claims 15-16

Document 5 [JP, 1-118895, A (Fujitsu General Limited), 11 May, 1989 (11.05.89); entire text] contains disclosures concerning blanking period operation similar to that disclosed in claims 15 and 16.

Since each of documents 2-5 concerns driving circuits for a liquid crystal display device, it is considered that applying the connections between driver circuits and signal lines disclosed in document 3 or 4, and the blanking period operation disclosed in document 5, to the liquid crystal display device disclosed in document 2 would be obvious to a person skilled in the art.

It is also considered that when doing this it would be obvious to a person skilled in the art to apply the art disclosed in document 5 to the time-sharing timing that arises in the art disclosed in documents 3 and 4.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

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Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of Box V (Citations and explanations):

Concerning claims 17, 21

Document 6 [JP, 9-319334, A (International Business Machines Corporation), 12 December, 1997 (12.12.97); entire text] discloses the correction of the amount of shift for the voltage-transmittance characteristic.

Since each of documents 2-4 and 6 concerns driving circuits for a liquid crystal display device, it is considered that applying the connections between driver circuits and signal lines disclosed in document 3 or 4, and the shift amount correction disclosed in document 6, to the liquid crystal display device disclosed in document 2 would be obvious to a person skilled in the art.

It is also considered that designing the circuitry in such a way that the correction circuitry is contained inside the drivers would be obvious to a person skilled in the art.